



09/730, 515.

Cof

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Letters Patent of:

Kazuo KURODA et al

Patent No.: 6,567,356 B2

Issued: May 20, 2003

For: OPTICAL DISC, AND READING SYSTEM AND MANUFACTURING
METHOD OF THE DISC

PETITION TO ACCEPT REQUEST FOR
CERTIFICATE OF CORRECTION

Certificate
SEP 15 2004
of Correction

Mail Stop: Petitions
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

September 10, 2004

Sir:

Petition is hereby made, to accept the filing of the attached Request for Certificate of Correction Under 37 C.F.R. 1.323 and issue a certificate of correction for the above identified patent.

The Certificate of Correction is necessary in order to add the Assignee's name to the title page of the Letters Patent and to amend Claim 2 and add new Claims 6 - 14 to the Letters Patent. In support of this request, the undersigned wishes to explain to the Patent and Trademark Office the events concerning this Letters Patent. On September 13, 2002, a Notice of Allowance/Notice of Allowability was mailed to the firm of the undersigned with a due date of December 13, 2002. Through an unintentional error on the part of an associate in the firm of the undersigned, the Issue Fee was not paid. When it was discovered that the Issue Fee had not been paid, the undersigned on December 26, 2002, prepared and filed a Petition For Revival of an Application for Patent Abandoned Unintentionally, a Request for Continued Examination and an Information Disclosure Statement. Copies of these documents along with the stamped

SEP 16 2004

postcard receipt are enclosed. On January 23, 2003, the undersigned filed a Preliminary Amendment, amending Claim 2 and adding new Claims 6 - 14 to the application. Copies of the Preliminary Amendment and the stamped postcard receipt are also enclosed. On or about May 20, 2003, the undersigned receive the above-identified Letters Patent. In reviewing PAIR records and after numerous telephone calls with the Director's Office of the Group Art Unit, it was determined that at the time that the Petition to Revive, Request for Continued Examination and Information Disclosure Statement were filed, the Patent and Trademark Office applied the fees attached to these documents as payment of the Issue Fee. This was never the undersigned's intention. The Patent and Trademark Office's attention is directed to the fact that on the Petition to Revive form, Section 2 B is not completed, which is the section concerning payment of the Issue Fee. During our review of the Letters Patent, it was discovered that the claim amendments made with the Preliminary Amendment of January 23, 2003, were not included in the Letters Patent, and that the Assignee's name was not included on the title page of the Letters Patent.

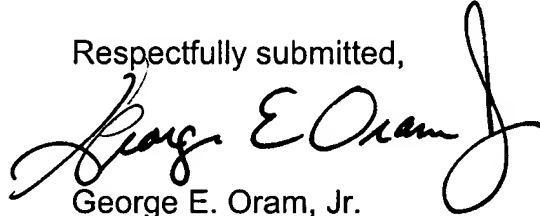
With regard to adding the Assignee's name and address to the title page of the Letters Patent, attached is a copy of the originally recorded Assignment and Notice of Recordation. As the undersigned did not authorize payment of the Issue Fee by the submission of Form PTOL-85 Part B, the Assignee's name and address were not printed on the Letters Patent. Therefore, it is respectfully submitted that this error to the Letters Patent occurred through no fault of the undersigned.

In view of the above explanation, it is respectfully requested that the attached Request for Certificate of Correction Under 37 C.F.R. 1.323 be accepted, and that a Certificate of Correction for the above-identified patent be issued to correct the errors.

It is also requested that the petition fee for this matter be waived, as it appears that the events surrounding the Request for Certificate of Correction are the responsibility of the Patent and Trademark Office, in that the Issue Fee was paid without

authorization from the undersigned. However, in the event that any fees are due with respect to this paper, please charge Deposit Account No. 01-2300 referencing Atty. Docket No. 107156-00033.

Respectfully submitted,



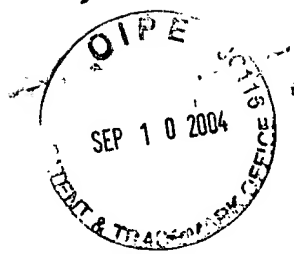
George E. Oram, Jr.
Attorney for Applicants
Reg. No. 27,931

Atty. Docket No.: 107156-00033

Customer No.: 004372
ARENT FOX PLLC
1050 Connecticut Avenue, N.W.
Suite 400
Washington, D. C. 20036-5339
Tel (202) 857-6000
Fax (202) 638-4810

GEO:mmg

Enclosures: Request for Certificate of Correction; Form PTO-1050 (2); Copy of Petition For Revival; Copy of Request for Continued Examination; Copy of Information Disclosure Statement; Copy of Stamped Postcard Receipt of December 26, 2002; Copy of Preliminary Amendment; Copy of Stamped Postcard Receipt of January 23, 2003; Copy of Originally Recorded Assignment; Copy of Notice of Recordation



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Letters Patent of:

Kazuo KURODA et al

Patent No.: 6,567,356 B2

Issued: May 20, 2003

For: OPTICAL DISC, AND READING SYSTEM AND MANUFACTURING
METHOD OF THE DISC

REQUEST FOR CERTIFICATE OF CORRECTION
UNDER 37 C.F.R. 1.183

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

September 10, 2004

Sir:

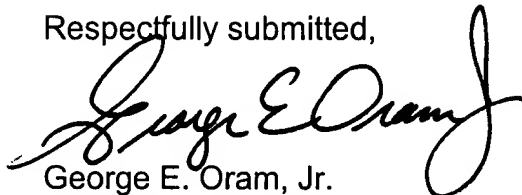
The undersigned requests that a Certificate of Correction be issued for the above-identified patent as indicated on the attached Form PTO-1050.

REMARKS

This request is being made in order to add the Assignee's name and address on the patent cover page, amend Claim 2 and add new Claims 6 - 14 to the Letters Patent. In support of these requests, we enclose a Petition to Accept Request for Certificate of Correction and supporting evidence. It is respectfully submitted that the errors occurred without deceptive intent on the part of the applicants' representative and that no new matter is being added.

In the event that any fees may be due with respect to this paper, please charge
Deposit Account No. 01-2300 referencing Atty. Docket No. 107156-00033.

Respectfully submitted,



George E. Oram, Jr.
Attorney for Applicants
Reg. No. 27,931

Atty. Docket No.: 107156-00033

Customer No.: 004372
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1050 Connecticut Avenue, N.W.
Suite 400
Washington, D. C. 20036-5339
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Enclosures: Form PTO-1050 (2); Copy of Petition For Revival; Copy of Request for Continued Examination; Copy of Information Disclosure Statement; Copy of Stamped Postcard Receipt of December 26, 2002; Copy of Preliminary Amendment; Copy of Stamped Postcard Receipt of January 23, 2003; Copy of Originally Recorded Assignment; Copy of Notice of Recordation

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO.: 6,567,356 B2

DATED: May 20, 2003

Page 1 of 6

INVENTOR(S): Kazuo KURODA et al

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Title Page:

Insert Item [70], **Assignee**, as follows:

-- Pioneer Electronic Corporation, Tokyo (JP) --.

IN THE CLAIMS:

Please replace Claim 2 as follows:

-- 2. The reading system according to claim 1, wherein
the second photodetector is further divided by a third dividing line optically parallel
with a radial direction of the optical disc;
third difference signal producing means is provided for producing a third difference
signal based on a difference between the added outputs of photodetecting elements of
each side divided by the third dividing line, the prepit information being obtained based
on the third difference signal. --

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UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO.: 6,567,356 B2

DATED: May 20, 2003

Page 2 of 6

INVENTOR(S): Kazuo KURODA et al

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

IN THE CLAIMS (cont.):

Please add new Claims 6-14 as follows:

-- 6. A reading system for reading a writable optical disc having an information writing track, a guiding track for introducing a laser beam to the information writing track, and prepit information including address information recorded on the guiding track, the system comprising:

light receiving means for receiving a reflected light of a laser beam irradiated to the information writing track of the optical disc;

prepit information detecting means;

tracking error signal producing means for producing a tracking error signal based on an output of the light receiving means;

removing means for removing an influence of the prepit based on the tracking error signal and an output of the prepit information detecting means from the tracking error signal. --

-- 7. The reading system for reading a writable optical disc according to claim 6, wherein

the light receiving means is a detector having divided four elements. --

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PATENT NO.: 6,567,356 B2

DATED: May 20, 2003

Page 3 of 6

INVENTOR(S): Kazuo KURODA et al

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

IN THE CLAIMS (cont.):

-- 8. The reading system for reading a writable optical disc according to claim 6, wherein the removing means comprises:

noise extracting means for extracting a noise component from the prepit information; and

a subtractor for subtracting a noise component from the tracking error signal. --

-- 9. A reading system for reading a writable optical disc having an information writing track and a guiding track for introducing a laser beam to the information writing track, wherein the guiding track has prepit information recorded with a first pattern and a second pattern having a predetermined phase difference from the first pattern so that the prepit information in the neighboring guiding tracks do not overlap in the radial direction, said reading system comprising:

a light receiving circuit which receives a reflected light of a laser beam irradiated to the information writing track of the optical disc;

a prepit information detecting circuit which detects the prepit information;

a tracking error signal producing circuit which produces a tracking error signal based on an output of the light receiving circuit; and

a removing circuit which removes an influence of the prepit based on an output of the prepit information detecting circuit from the tracking error signal. --

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PATENT NO.: 6,567,356 B2

DATED: May 20, 2003

Page 4 of 6

INVENTOR(S): Kazuo KURODA et al

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

IN THE CLAIMS (cont.):

-- 10. The reading system according to claim 9, wherein the light receiving circuit is a detector divided into four elements. --

-- 11. The reading system according to claim 9, wherein the removing circuit comprising:

a noise extracting circuit which extracts noise component from the prepit information; and

a subtractor which subtracts the noise component from the tracking error signal. --

-- 12. A reading system for reading a writable optical disc having an information writing track and a guiding track for introducing a laser beam to the information writing track, wherein the guiding track has prepit information recorded with a first pattern and a second pattern having a predetermined phase difference from the first pattern so that the prepit information in the neighboring guiding tracks do not overlap in the radial direction, said reading system comprising:

a first photodetector having a first photodetecting element and a second photodetecting element divided by a first line optically parallel with a tangential direction of the information writing track, which detects reflected light of a first laser beam irradiated to the information writing track;

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DATED: May 20, 2003

Page 5 of 6

INVENTOR(S): Kazuo KURODA et al

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

IN THE CLAIMS (cont.):

(Claim 12 continued)

a first subtracting circuit which produces a first difference signal based on outputs of the first photodetecting element and the second photodetecting element of the first photodetector;

a second photodetector having a third photodetecting element and a fourth photodetecting element divided by a second line optically parallel with a tangential direction of the information writing track, which detects reflected light of a second laser beam irradiated to the guiding track including the prepit information;

a second subtracting circuit which produces a second difference signal based on outputs of the third photodetecting element and the fourth photodetecting elements of the second photodetector;

a level adjusting circuit which adjusts a level of the second difference signal; and

a tracking error signal generating circuit which generates a tracking error signal based on the first difference signal and an output of the level adjusting circuit. --

-- 13. The reading system according to claim 12, further comprising a prepit detection circuit which generates a prepit signal based on an output of the second photodetector. --

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Page 6 of 6

INVENTOR(S): Kazuo KURODA et al

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

IN THE CLAIMS:

-- 14. The reading system according to claim 13, wherein the second photodetector is further divided by a third line optically parallel with a radial direction of the optical disc, and

wherein the prepit detection circuit generates the prepit signal by subtracting an output of one side of the second photodetector divided by the third line from an output of another side of the second photodetector divided by the third line. --

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-- Pioneer Electronic Corporation, Tokyo (JP) --.

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Please replace Claim 2 as follows:

-- 2. The reading system according to claim 1, wherein
the second photodetector is further divided by a third dividing line optically parallel
with a radial direction of the optical disc;
third difference signal producing means is provided for producing a third difference
signal based on a difference between the added outputs of photodetecting elements of
each side divided by the third dividing line, the prepit information being obtained based
on the third difference signal. --

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Please add new Claims 6-14 as follows:

-- 6. A reading system for reading a writable optical disc having an information writing track, a guiding track for introducing a laser beam to the information writing track, and prepit information including address information recorded on the guiding track, the system comprising:

light receiving means for receiving a reflected light of a laser beam irradiated to the information writing track of the optical disc;

prepit information detecting means;

tracking error signal producing means for producing a tracking error signal based on an output of the light receiving means;

removing means for removing an influence of the prepit based on the tracking error signal and an output of the prepit information detecting means from the tracking error signal. --

-- 7. The reading system for reading a writable optical disc according to claim 6, wherein

the light receiving means is a detector having divided four elements. --

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INVENTOR(S): Kazuo KURODA et al

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IN THE CLAIMS (cont.):

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a subtractor for subtracting a noise component from the tracking error signal. --

-- 9. A reading system for reading a writable optical disc having an information writing track and a guiding track for introducing a laser beam to the information writing track, wherein the guiding track has prepit information recorded with a first pattern and a second pattern having a predetermined phase difference from the first pattern so that the prepit information in the neighboring guiding tracks do not overlap in the radial direction, said reading system comprising:

a light receiving circuit which receives a reflected light of a laser beam irradiated to the information writing track of the optical disc;

a prepit information detecting circuit which detects the prepit information;

a tracking error signal producing circuit which produces a tracking error signal based on an output of the light receiving circuit; and

a removing circuit which removes an influence of the prepit based on an output of the prepit information detecting circuit from the tracking error signal. --

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Page 4 of 6

INVENTOR(S): Kazuo KURODA et al

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IN THE CLAIMS (cont.):

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-- 11. The reading system according to claim 9, wherein the removing circuit comprising:

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a subtractor which subtracts the noise component from the tracking error signal. --

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a first photodetector having a first photodetecting element and a second photodetecting element divided by a first line optically parallel with a tangential direction of the information writing track, which detects reflected light of a first laser beam irradiated to the information writing track;

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DATED: May 20, 2003

Page 5 of 6

INVENTOR(S): Kazuo KURODA et al

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

IN THE CLAIMS (cont.):

(Claim 12 continued)

a first subtracting circuit which produces a first difference signal based on outputs of the first photodetecting element and the second photodetecting element of the first photodetector;

a second photodetector having a third photodetecting element and a fourth photodetecting element divided by a second line optically parallel with a tangential direction of the information writing track, which detects reflected light of a second laser beam irradiated to the guiding track including the prepit information;

a second subtracting circuit which produces a second difference signal based on outputs of the third photodetecting element and the fourth photodetecting elements of the second photodetector;

a level adjusting circuit which adjusts a level of the second difference signal; and

a tracking error signal generating circuit which generates a tracking error signal based on the first difference signal and an output of the level adjusting circuit. --

-- 13. The reading system according to claim 12, further comprising a prepit detection circuit which generates a prepit signal based on an output of the second photodetector. --

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UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO.: 6,567,356 B2

DATED: May 20, 2003

Page 6 of 6

INVENTOR(S): Kazuo KURODA et al

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

IN THE CLAIMS:

-- 14. The reading system according to claim 13, wherein the second photodetector is further divided by a third line optically parallel with a radial direction of the optical disc, and

wherein the prepit detection circuit generates the prepit signal by subtracting an output of one side of the second photodetector divided by the third line from an output of another side of the second photodetector divided by the third line. --

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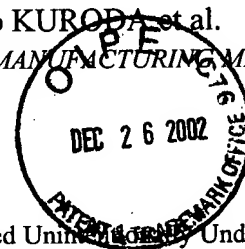
Attorney Docket No. 107156-00033

U.S. Patent Application No.: 09/730,515

Filed: December 15, 2000 Applicants: Kazuo KURODA et al.

Title: OPTICAL DISC, AND READING SYSTEM AND MANUFACTURING METHOD OF THE DISC

Papers filed herewith on: December 26, 2002



The following papers are attached:

Petition for Revival of an Application for Patent Abandoned Under 37

C.F.R. 1.137(b)

Request for Continued Examination Transmittal

Information Disclosure Statement w/ PTO Form 1449 and 9 references

Check Number *352008 in the amount of \$2,020.00 (\$740 RCE fee & 1280 Revival Fee)

COMMISSIONER OF PATENTS

GEO/lw

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✱

**PETITION FOR REVIVAL OF AN APPLICATION FOR PATENT ABANDONED
UNINTENTIONALLY UNDER 37 CFR 1.137(b)**Docket Number (Optional)
107156-00033

First named inventor: Kazuo KURODA et al.

Application No.: 09/730,515

Group Art Unit: 2653

Filed: December 15, 2000

Examiner: Hindi, Nabil Z.

Title: OPTICAL DISC, AND READING SYSTEM AND MANUFACTURING METHOD OF THE DISC

Attention: Office of Petitions
Assistant Commissioner for Patents
Box DAC
Washington, D.C. 20231NOTE: If information or assistance is needed in completing this form, please contact
Petitions Information at (703)305-9282.

The above-identified application became abandoned for failure to file a timely and proper reply to a notice or action by the United States Patent and Trademark Office. The date of abandonment is the day after the expiration date of the period set for reply in the Office notice or action plus any extensions of time actually obtained.

APPLICANT HEREBY PETITIONS FOR REVIVAL OF THIS APPLICATION

NOTE: A grantable petition requires the following items:

- (1) Petition fee;
- (2) Reply and/or issue fee;
- (3) Terminal disclaimer with disclaimer fee -- required for all utility and plant applications filed before June 8, 1995; and for all design applications; and
- (4) Statement that the entire delay was unintentional.

1. Petition fee

☐ Small entity - fee \$ _____ (37 CFR 1.17(m)). Applicant claims small entity status. See 37 CFR 1.27.☒ Other than small entity - fee \$ 1,280.00 (37 CFR 1.17(m))

2. Reply and/or fee

A. The reply and/or fee to the above-noted Office action in
the form of RCE and Information Disclosure Statement (identify type of reply):

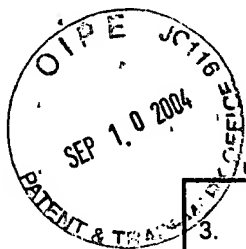
- ☐
- has been filed previously on _____.
-
- ☒
- is enclosed herewith.

B. The issue fee of \$ _____

- ☐
- has been paid previously on _____.
-
- ☐
- is enclosed herewith.

[Page 1 of 2]

Burden Hour Statement: This form is estimated to take 1.0 hour to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



3. Terminal disclaimer with disclaimer fee

- ☒ Since this utility/plant application was filed on or after June 8, 1995, no terminal disclaimer is required.
- ☐ A terminal disclaimer (and disclaimer fee (37 CFR 1.20(d)) of \$_____ for a small entity or \$_____ for other than a small entity) disclaiming a period equivalent to the period of abandonment is enclosed herewith (see PTO/SB/63).

4. Statement. The entire delay in filing the required reply from the due date for the required reply until the filing of a grantable petition under 37 CFR 1.137(b) was unintentional. [NOTE: The United States Patent and Trademark Office may require additional information if there is a question as to whether either the abandonment or the delay in filing a petition under 37 CFR 1.137(b) was unintentional (MPEP 711.03(c)(III)(C) and (D))].

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

December 26, 2002

Date

Signature

Telephone
Number: (202) 828-3455

George E. Oram, Jr.

Typed or printed name

Registration No. 27,931

Address

Arent Fox Kintner Plotkin & Kahn,
1050 Connecticut Avenue, NW
Suite 400
Washington D.C. 20036-5339

Enclosures: ☒ Fee Payment

☒ Reply

☐ Terminal Disclaimer Form

☐ Additional sheets containing statements establishing unintentional delay

☐ _____

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

SEP 10 2004

REQUEST FOR CONTINUED EXAMINATION (RCE) TRANSMITTAL

Subsection (b) of 35 U.S.C. § 132, effective on May 29, 2000,
 provides for continued examination of an utility or plant application
 filed on or after June 8, 1995.
 See The American Inventors Protection Act of 1999 (AIPA).

Application Number	09/730,515
Filing Date	December 15, 2000
First Named Inventor	Kazuo KURODA et al.
Group Art Unit	2653
Examiner Name	HINDI, Nabil Z.
Attorney Docket Number	107156-00033

This is a Request for Continued Examination (RCE) under 37 C.F.R. § 1.114 of the above-identified application.

NOTE: 37 C.F.R. § 1.114 is effective on May 29, 2000. If the above-identified application was filed prior to May 29, 2000, applicant may wish to consider filing a continued prosecution application (CPA) under 37 C.F.R. § 1.53(d) (PTO/SB/29) instead of a RCE to be eligible for the patent term adjustment provisions of the AIPA. See Changes to application Examination and Provisions Application Practice, Final Rule, 65 Fed. Reg. 50092 (Aug. 16, 2000); Interim Rule, 65 Fed. Reg. 14865 (Mar. 20, 2000), 1233 Off. Gaz. Pat. Office 47 (Apr. 11, 2000), which established RCE practice.

1. Submission required under 37 C.F.R. § 1.114

- a. ☐ Previously submitted
- i. ☐ Consider the amendment(s)/reply under 37 C.F.R. § 1.116 previously filed on _____
 (Any unentered amendment(s) referred to above will be entered).
- ii. ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
- iii. ☐ Other _____
- b. ☒ Enclosed
- i. ☐ Amendment/Reply
- ii. ☐ Affidavit(s)/Declaration(s)
- iii. ☒ Information Disclosure Statement (IDS)
- iv. ☐ Other _____

2. Miscellaneous


- a. ☐ Suspension of action on the above-identified application is requested under 37 C.F.R. § 1.103(c) for a period of _____ months. (Period of suspension shall not exceed 3 months; Fee under 37 C.F.R. § 1.17(i) required)
- b. ☐ Other _____

3. Fees

The RCE fee under 37 C.F.R. § 1.17(e) is required by 37 C.F.R. § 1.114 when the RCE is filed.

- a. ☐ The Director is hereby authorized to charge the following fees, fee deficiency or credit any overpayments, to Deposit Account No. 01-2300
- i. ☒ RCE fee required under 37 C.F.R. § 1.17(e)
- ii. ☐ Extension of time fee (37 C.F.R. §§ 1.136 and 1.17)
- iii. ☐ Other _____
- b. ☒ Check in the amount of \$ 2,020.00
(\$740.00 RCE Fee &
\$1,280.00 Revival Fee)

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Name (Print/Type)	George E. Oram, Jr.	Registration No. (Attorney/Agent)	27,931
Signature)		Date	December 26, 2002

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND Fees and Completed Forms to the following address: Assistant Commissioner for Patents, Box RCE, Washington, DC 20231.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT APPLICATION

In re application of: Kazuo KURODA et al. Atty. Dck. No. 107156-00033

Serial No.: 09/730,515

Examiner: HINDI, Nabil Z.

Filed: December 15, 2000

Art Unit: 2653

For: OPTICAL DISC AND READING SYSTEM AND MANUFACTURING METHOD OF THE DISC

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
Washington, D.C. 20231

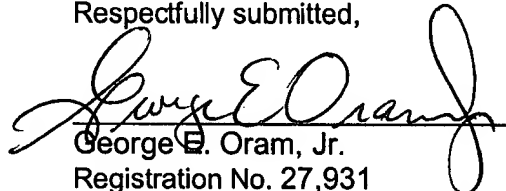
Date: December 26, 2002

Sir:

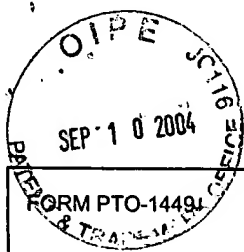
Pursuant to 37 CFR §1.56, the attention of the Patent and Trademark Office is hereby directed to the information items listed on the attached PTO-1449. Unless otherwise indicated herein, one copy of each item is attached. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the items be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

- ☒ 1. This Information Disclosure Statement is being filed (a) within three months of the U.S. filing date, OR (b) before the mailing date of a first Office Action on the merits in the present application, OR (c) accompanies a Request for Continued Examination. No certification or fee is required.
- ☒ 2. An English-language Abstract(s) of the non-English language reference(s) are attached hereto.
- ☒ 3. U.S. Patent No. 5,517,485 issued May 14, 1996 serves as a translation of the non-English language reference No. JP6-333240.
U.S. Patent No. 5,185,730 issued February 9, 1993 serves as a translation of the non-English language reference No. JP3-86935.
U.S. Patent No. 4,775,968 issued October 4, 1988 serves as a translation of the non-English language reference No. JP61-94246.

Respectfully submitted,


George E. Oram, Jr.
Registration No. 27,931

Customer No. 004372
ARENT FOX KINTNER PLOTKIN & KAHN, PLLC
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Suite 400
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Fax: (202) 638-4810
GEO/lw



Sheet 1 of 1

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO.

107156-00033

SERIAL NO.

09/730,515

LIST OF REFERENCES CITED BY APPLICANT

(Use several sheets if necessary)

APPLICANT

Kazuo KURODA et al.

FILING DATE

December 15, 2000

GROUP

2653

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NO.	DATE	NAME	CLASS	SUB- CLASS	FILING DATE
	AA	4775968	10/4/1988	Kiyoshi OHSATO			
	AB	5185730	2/9/1993	Toshihiro KOMAKI et al.			
	AC	5517485	5/14/1996	Kenichi NISHIUCHI et al.			
	AD						
	AE						
	AF						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION		
							YES	NO	PART.
	AG	JP3086935	4/11/1991	JAPAN					X
	AH	JP61094246	5/13/1986	JAPAN					X
	AI	JP6251403	9/9/1994	JAPAN					X
	AJ	JP61042738	3/1/1986	JAPAN					X
	AK	JP63269356	11/7/1988	JAPAN					X
	AL	JP6333240	12/2/1994	JAPAN					X

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

	AM	
	AN	
	AO	

EXAMINER

DATE CONSIDERED

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



Attorney Docket No. 107156-00033
U.S. Patent Application No. 09/730,515
Filed: December 15, 2000
Applicants: Kuroda et al.
Papers filed herewith on: January 23, 2003
A check in the amount of \$



The following papers are attached:

☒ Preliminary Amendment ☐ Notice of Appeal
☐ Extension of Time(1,2,3) ☐ Issue Fee
☐ Response to Missing Parts ☐ Priority Document

☐ IDS/1449 w/
☐ Assignment Recordation
☐ Other

GEO/bgk

COMMISSIONER OF PATENTS

Due Date:

✱



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:

KURODA et al.

Group Art Unit: 2651

Serial No.: 09/730,515

Examiner: N. Hindi

Filed: December 15, 2000

Attorney Dkt. No.: 107156-00033

For: OPTICAL DISC, AND READING SYSTEM AND MANUFACTURING
METHOD OF THE DISC

PRELIMINARY AMENDMENT UNDER 37 C.F.R. § 1.121

Commissioner for Patents
Washington, D.C. 20231

January 23, 2003

Sir:

Prior to the further examination in accordance with the Request for Continued Examination filed December 26, 2002, please amend the above-identified application as follows:

IN THE CLAIMS:

Please amend claim 2 as follows. A copy of the marked-up claim is attached to this paper showing the changes, as required by 37 C.F.R. §1.121.

2. (Amended) The reading system according to claim 1, wherein
the second photodetector is further divided by a third dividing line optically parallel with a radial direction of the optical disc;

third difference signal producing means is provided for producing a third difference signal based on a difference between the added outputs of photodetecting elements of each side divided by the third dividing line, the prepit information being obtained based on the third difference signal.

Please add claims 6-14 as follows:

6. (New) A reading system for reading a writable optical disc having an information writing track, a guiding track for introducing a laser beam to the information writing track, and prepit information including address information recording on the guiding track, the system comprising:

light receiving means for receiving a reflected light of a laser beam irradiated to the information writing track of the optical disc;

prepit information detecting means;

tracking error signal producing means for producing a tracking error signal based on an output of the light receiving means;

removing means for removing an influence of the prepit based on the tracking error signal and an output of the prepit information detecting means from the tracking error signal.

7. (New) The reading system for reading a writable optical disc according to claim 6, wherein

the light receiving means is a detector having divided four elements.

8. (New) The reading system for reading a writable optical disc according to claim 7, wherein the removing means comprises:

noise extracting means for extracting a noise component from the prepit information; and

a subtractor for subtracting a noise component from the tracking error signal.

9. (New) A reading system for reading a writable optical disc having an information writing track and a guiding track for introducing a laser beam to the information writing track, wherein the guiding track has prepit information recorded with a first pattern and a second pattern having a predetermined phase difference from the first pattern so that the prepit information in the neighboring guiding tracks do not overlap in the radial direction, said reading system comprising:

a light receiving circuit which receives a reflected light of a laser beam irradiated to the information writing track of the optical disc;

a prepit information detecting circuit which detects the prepit information;

a tracking error signal producing circuit which produces a tracking error signal based on an output of the light receiving circuit; and

a removing circuit which removes an influence of the prepit based on an output of the prepit information detecting circuit from the tracking error signal.

10. (New) The reading system according to claim 9, wherein the light receiving circuit is a detector divided into four elements.

11. (New) The reading system according to claim 9, wherein the removing circuit comprising:

a noise extracting circuit which extracts noise component from the prepit information; and

a subtractor which subtracts the noise component from the tracking error signal.

12. (New) A reading system for reading a writable optical disc having an information writing track and a guiding track for introducing a laser beam to the information writing track, wherein the guiding track has prepit information recorded with a first pattern and a second pattern having a predetermined phase difference from the first pattern so that the prepit information in the neighboring guiding tracks do not overlap in the radial direction, said reading system comprising:

a first photodetector having a first photodetecting element and a second photodetecting element divided by a first line optically parallel with a tangential direction of the information writing track, which detects reflected light of a first laser beam irradiated to the information writing track;

a first subtracting circuit which produces a first difference signal based on outputs of the first photodetecting element and the second photodetecting element of the first photodetector;

a second photodetector having a third photodetecting element and a fourth photodetecting element divided by a second line optically parallel with a tangential direction of the information writing track, which detects reflected light of a second laser beam irradiated to the guiding track including the prepit information;

a second subtracting circuit which produces a second difference signal based on outputs of the third photodetecting element and the fourth photodetecting elements of the second photodetector;

a level adjusting circuit which adjusts a level of the second difference signal; and

a tracking error signal generating circuit which generates a tracking error signal based on the first difference signal and an output of the level adjusting circuit.

13. (New) The reading system according to claim 12, further comprising a prepit detection circuit which generates a prepit signal based on an output of the second photodetector.

14. (New) The reading system according to claim 13, wherein the second photodetector is further divided by a third line optically parallel with a radial direction of the optical disc, and wherein the prepit detection circuit generates the prepit signal by subtracting an output of one side of the second photodetector divided by the third line from an output of another side of the second photodetector divided by the third line.

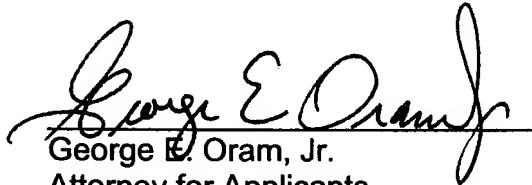
REMARKS

Claims 1, 2 and 5 (renumbered as claims 1-3 as noted in the Notice of Allowance September 13, 2002) are pending in the present application. By this Preliminary Amendment, claim 2 has been amended and claims 6-14 have been added. All amendments and additions are supported by the Specification and Drawings. Thus, no new matter is presented.

Should the Examiner believe anything further is desirable in order to place this application in better condition for allowance, the Examiner is requested to contact the undersigned at the telephone number listed below.

In the event this paper is not considered to be timely filed, the Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to Counsel's Deposit Account No. 01-2300 making reference to Attorney Docket No. 107156-00033.

Respectfully submitted,



George E. Oram, Jr.
Attorney for Applicants
Reg. No. 27,931

ARENT FOX KINTNER PLOTKIN & KAHN, PLLC
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Fax: (202) 638-4810
GEO/bgk

Enclosures: Marked-Up Copy Claims

MARKED-UP COPY CLAIMS

2. (Amended) The reading system according to claim 1, wherein
the second photodetector is further divided by a third dividing line optically
parallel with a radial direction of the optical disc[, and];

third difference signal producing means is provided for producing a third
difference signal [is provided] based on a difference between the added outputs of
photodetecting elements of each side divided by the third dividing line, the prepit
information being obtained based on the third difference signal.



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER
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Washington, D.C. 20231

JANUARY 30, 1997

PTAS

NIKAIDO, MARMELESTEIN, MURRAY & ORAM LLP
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STE. 330 - G STREET LOBBY
WASHINGTON, D.C. 20005-5701



100248898A

UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

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RECORDATION DATE: 06/25/1996

REEL/FRAME: 8224/0683
NUMBER OF PAGES: 2

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

KURODA, KAZUO

DOC DATE: 06/13/1996

ASSIGNOR:

SUZUKI, TOSHIO

DOC DATE: 06/13/1996

ASSIGNOR:

MURAMATSU, EIJI

DOC DATE: 06/13/1996

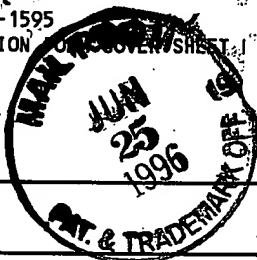
ASSIGNEE:

PIONEER ELECTRONIC CORPORATION
4-1 MEGURO 1-CHOME
MEGURO-KU TOKYO, JAPAN

SERIAL NUMBER: 08668334
PATENT NUMBER:

FILING DATE: 06/25/1996
ISSUE DATE:

Form PTO-1595
RECORDATION COVER SHEET



100248898

08-09-1996

U.S. Department of Commerce
Patents & Trademarks Office

08/668334

Attorney Docket No. P7156-6022

Date: June 25, 1996

To the Honorable Commissioner of Patents and Trademarks:
Please record the attached original documents or copy thereof

1. Name of conveying party(ies)

Kazuo KURODA; Toshio SUZUKI; Eiji MURAMATSU

Additional name(s) of conveying party(ies) attached?

☐ Yes ☒ No

2. Name and address of receiving party(ies):

Name: Pioneer Electronic Corporation

Internal Address: _____

Street Address: 4-1 Meguro 1-chome

Meguro-ku, Tokyo, JAPAN

City: _____ State: _____ Zip: _____

Additional name(s) & address(es) attached?

☐ Yes ☒ No

3. Nature of conveyance:

☒ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Other _____

Execution Date: June 13, 1996

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: June 13, 1996

A. Patent Application No.(s)

B. Patent No.(s) 65705 U.S. PTO

New Application

8/668334

Additional numbers attached? ☐ Yes ☒ No



08/08/96

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: NIKAIIDO, MARMELESTEIN, MURRAY & ORAM LLP

Internal Address: _____

Street Address: Metropolitan Square, 655 15th St., N.W.,

Suite 330 - G Street Lobby

City: Washington State: DC Zip: 20005-5701

6. Total number of applications and patents involved:

1

7. Total fee (37 CFR 3.41)..... \$ 40.00

☒ Included in check #10699 enclosed

☒ Any additional fees are authorized to be charged to deposit account

8. Deposit account number:

14-1060

(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

George E. Oram, Jr.
Name of Person Signing
Reg. No. 27,931

George E. Oram, Jr.
Signature

330 LC 07/15/96 08668334

1581

40.00 CK

June 25, 1996

Date

Total number of pages including cover sheet, attachments and document: 2

Docket No. _____

IN CONSIDERATION of the sum of One Dollar (\$1.00), and of other good and valuable consideration paid to the undersigned inventor(s) (hereinafter ASSIGNOR) by
PIONEER ELECTRONIC CORPORATION
of 4-1 Meguro 1-chome, Meguro-ku, Tokyo, JAPAN

(hereinafter ASSIGNEE), the receipt of which is hereby acknowledged, the undersigned ASSIGNOR hereby sells, assigns and transfers to ASSIGNEE the entire and exclusive right, title and interest to the invention entitled "OPTICAL DISC, AND READING SYSTEM AND MANUFACTURING METHOD OF THE DISC"

for which application for Letters Patent of the United States was executed on even date herewith unless otherwise indicated below:

*filed on _____, Serial No. _____

(Nikaido, Marmelstein, Murray & Oram is hereby authorized to insert the series code, serial number and/or filing date hereon, when known)

and all Letters Patent of the United States to be obtained therefor on said application or any continuation, division, renewal, substitute, reissue or reexamination thereof for the full term or terms for which the same may be granted.

The ASSIGNOR agrees to execute all papers necessary in connection with application and any continuing, divisional, reissue or reexamination applications thereof and also to execute separate assignments in connection with such applications as the ASSIGNEE may deem necessary or expedient.

The ASSIGNOR agrees to execute all papers necessary in connection with any interference, litigation, or other legal proceeding which may be declared concerning this application or any continuation, division, reissue or reexamination thereof or Letters Patent or reissue patent issued thereon and to cooperate with the ASSIGNEE in every way possible in obtaining and producing evidence and proceeding with such interference, litigation, or other legal proceeding.

IN WITNESS WHEREOF, the undersigned inventor(s) has (have) affixed his/her/their signature(s).

[illegible]